Higher Education Forecasting for Shànxi Province

Consultant report
World Bank Project on Manpower Forecasting in Shànxi Province
Beijing University of Aeronautics and Astronautics

November, 1996

Bertram Bruce
Susan Bruce

College of Education
University of Illinois at Urbana-Champaign
1310 South Sixth Street
Champaign, IL 61820

Introduction

This report summarizes the major points of our study of the World Bank Project on Manpower Forecasting in Shanxi Province. Many of the detailed comments have been covered in a previous memo and in oral discussions with faculty at Beijing Háng Kong Háng Tian Daxue and staff at the Education Commissions of both Shanxi and Táiyuán.

We have chosen to emphasize here some points that supplement the findings of the medium-term report, “Manpower Forecasting in Shanxi Province” and current work in Shanxi. These supplements are not intended to redirect the overall effort in any way, but merely to highlight some pertinent issues that may be useful in the continuing work. In general, our perception of the work thus far is that of a careful, committed study of a complex set of problems. The models applied seem entirely appropriate, and where limitations arise they are primarily in terms of limited available data and the impossibility of foreseeing future events.

Basis of this Report

This report is based on a limited set of information, but one which gives us some insight into the problems facing manpower forecasting and development in Shanxi. We have had many meetings with Professors Chen Liang You and Zhang Yan Tong from Beijing Háng Kong Háng Tian Daxue. We also had a week of meetings with Chen Jin Liang, Director for the World Bank Project in Táiyuán, and with various other members of the project there.

During our week in Shanxi, we met with many members of the Táiyuán and the Shanxi Education Commissions. We also presented a seminar with discussion at Táiyuán Industrial University. We also met with staff at and toured Táihang Instruments Factory. Finally, we visited and observed at three schools:

Date	School	Level	Location
11/8/96	Táiyuán No. 51 Wu Yu Li	Primary	Táiyuán, Shanxi
11/7/96	Táiyuán No. 36	Middle	Táiyuán, Shanxi
11/7/96	Táihang Instruments Affiliated	Primary	Táiyuán, Shanxi

Our comments are based on these meetings and discussions as well as our reading of the medium-term report, “Manpower Forecasting in Shanxi Province.” Obviously, they also reflect to the greatest extent our own experiences with and knowledge of parallel issues in the United States.

Our report to follow will be essentially a list of comments, rather than a quantitative analysis, a detailed critique, or a prescription for future steps to take. We believe this will be more useful to the project and moreover, represents what we can appropriately contribute.

Comments on the Interim Report

In an earlier memo we made many comments on the interim report; only some major points are repeated here in order to have everything in one document. The medium-term report, “Manpower Forecasting in Shanxi Province” is a very useful and important document describing economic, training, and education trends in Shanxi Province. It is especially helpful in showing some of the major issues confronting Shanxi Province today. It also shows clearly where statistical data can help in talent forecasting (pp. 8-13) and where such data are lacking (pp. 13-14).

Several macro-level questions need to be kept in mind as the project continues:

- How can the project’s findings be related to international efforts in manpower forecasting, both as models and as data indicative of global trends? (see for example the section below on WWW resources)
- How much micro-level analysis of workplace and education trends is necessary? (see for example the section below on flexibility)
- How do global trends, major technology shifts, interactions with other provinces, population shifts, environmental issues, world trade, and so on affect the

conclusions of the study? (see for example the section below on small business development)

- How will the findings of the research on manpower forecasting be incorporated into the overall Shanxi Project? (see for example the section below on audience)

Use of World Wide Web Resources

The problems of manpower forecasting are not unique to this project. Even in highly developed countries there are problems similar in kind, though perhaps not in degree, in terms of data reliability and the uncertain future. In this context, an increasingly useful resource is the World Wide Web. It contains voluminous reports and models that can be helpful. Moreover, it contains reports that will not be available in print form for many months, if at all.

Flexibility in the Context of a Dynamic Development Process

The contrast between parts of Beijing and parts of the Shanxi countryside is striking to us as visitors. That contrast presents enormous challenges for Shanxi Province and for this project: How can we speak analytically about major qualitative changes that represent decades, if not centuries of development for other regions? This problem is exacerbated by the fact that the target is moving; we cannot think only of the technology and workplace needs of 1996, but of those of the next century.

There is a dynamism to development that cannot be neatly captured in a planning model, no matter how carefully carried out. But it would be a mistake to allow that dynamism to imply inaction. Clearly, some planning is necessary, otherwise changes may not occur at all, or they may even in a counter-productive direction.

The solution may lie in a greater emphasis on flexibility. Manpower needs may have to be defined less in terms of conventional categories and more in terms of workers having skills that can applied flexibly to meet new challenges. This suggests a greater emphasis on knowing how to apply theoretical knowledge in various areas, on knowing how to integrate and assimilate new knowledge, and on general learning skills–learning how to learn.

This flexibility is a special problem for the forecasting process: How to recognize new kinds of skills within institutional contexts that define work and study in traditional, even outmoded categories.

Small Business Development

We are aware that in Shanxi, small business typically means a shop keeper or service provider, one without a university education or the work-related need for one. Thus, the analysis of manpower needs and higher education planning does not incorporate small business preparation as a significant category. That is appropriate in the narrow sense of defining needs for the next few years.

But in many countries today, small businesses are seen as the engine for economic development and technological change. Among the small shop keepers are

also the Bill Gates's who develop small operations into huge multinational corporations. Many of those who have developed small businesses of the latter type benefited greatly from university training. Thus, even though little hard data supports the case that universities should focus on small businesses or entrepreneurship, it may be short-sighted to ignore it.

The project staff are well aware of the fact that a category not showing up as a significant data point should not exclude it from the overall analysis. In fact, the mid-term report addresses issues such as this in its final section. We were pleased to see these issues addressed there and in our discussions., and recommend that they be explored even more in future work. Small business development is but one example.

Involving a Broad Audience

One question we asked was about the audience for the project: Who will read and respond to the analyses? If it were the case that highly detailed and reliable manpower forecasts could be made far in advance, it might be possible to use such forecasts in a direct and simple fashion to allocate resources or otherwise set Provincial policies. But both the comments of project staff and our perceptions point in a different direction.

In a context of great changes, uncertain trends in world trade, technology, and other arenas, and a greater number of independent actors, such as universities, companies, and joint ventures, the most useful course may be to seek wide distribution of findings so that people and organizations can each may the most informed decisions. For example, a university designing a new program of study, or a company deciding how to allocate the research budget might equally need to avail themselves of data and guidelines about future manpower needs.

This suggests that the project might seek various ways to distribute the report as widely as possible, using current technologies such as copy machines, faxes, as well as technologies just coming into wider use, such as the Internet. Wider distribution would serve a second important purpose. The more involved parties can read and respond to the report, the more it can be refined in terms of accuracy and usefulness.